



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.             | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------------------|-------------|----------------------|---------------------|------------------|
| 09/990,279                  | 11/23/2001  | Hyung-Ki Hong        | 8733.545.00         | 2426             |
| 30827                       | 7590        | 11/30/2006           | EXAMINER            |                  |
| MCKENNA LONG & ALDRIDGE LLP |             |                      | SEFER, AHMED N      |                  |
| 1900 K STREET, NW           |             |                      | ART UNIT            |                  |
| WASHINGTON, DC 20006        |             |                      | PAPER NUMBER        |                  |
|                             |             |                      | 2826                |                  |

DATE MAILED: 11/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                       |  |
|------------------------------|--------------------------------------|---------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>09/990,279 | <b>Applicant(s)</b><br>HONG, HYUNG-KI |  |
|                              | <b>Examiner</b><br>A. Sefer          | <b>Art Unit</b><br>2826               |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 2826

## **DETAILED ACTION**

### ***Response to Amendment***

1. The amendment filed September 20, 2006 has been entered; no new claims have been added.

### ***Specification***

2. Claim 1 is objected to because of the following informalities: The recitation calling for, "wherein said frame ..." should read "wherein said timing frame ..." Appropriate correction is required.

### ***Allowable Subject Matter***

3. The indicated allowability of claims 1-8 is withdrawn in view of the newly discovered reference(s) to Asao et al. ("Asao") US PG-Pub 2003/0107538. Rejections based on the newly cited reference(s) follow.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Asao.

Asao discloses in figs. 10-17 a field sequential liquid crystal display device, comprising:  
a liquid crystal panel 80 having an upper substrate 81a/41, a lower substrate 81b/21 and a liquid

Art Unit: 2826

crystal layer 85/49 therebetween; a backlight device 101 under the liquid crystal panel for irradiating light to the liquid crystal panel and having three color light sources having one of colors Red, Green and Blue (**as in claim 3**); and an image signal processor (pars. 17, 18 and 34), wherein said frame is divided into subframes, (fig. 17).

Note that a functional language (**controlling** a sequential lighting order and combination of the three color light sources; **controls** the combination and lighting order in relation to a timing frame; **decides** the combination of the three color light sources at each subframe; and wherein the three color lights are **selectively lit** at each subframe; or **changes** the lighting order and combination of the three color light (**claim 4**)) in a device claim is directed to the device per se, no matter which of the device's functions is referred to in the claim. See *In re Ludtke and Sloan*, 169 USPQ 563 at 567, and *In re Swinehart*, 169 USPQ 226, both of which make it clear that it is the patentability of the device per se which must be determined in a "functional language" claim and not the patentability of the function, and that an old or obvious device alleged to perform a new function is not patentable as a device, whether claimed in "functional language" terms or not. Note that the above case law makes it clear that in such cases applicant has the burden of showing that a prior art device that appears reasonably capable of performing the allegedly novel function is in fact incapable of doing so. See MPEP § 2114. See *In re Schreiber*, 44 USPQ2d 1429, 1432 (Fed. Cir. 1997) (Spout having "taper ... such as to by itself jam up the popped popcorn before the end of the cone and permit the dispensing of only a few kernels at a shake" anticipated by an oil can spout having the same shape as spout Applicant disclosed as being adapted for dispensing said only a few kernels at said shake) for a discussion of the roles of examiner and applicant in determining when and how functional limitations

Art Unit: 2826

distinguish a claim from prior art disclosing the same structure. See also *In re King*, 231 USPQ 136 (Fed. Cir, 1986) ("It did not suffice merely to assert that **Asao** does not **control the combination and lighting or decide the combination of the three color light sources**], challenging the PTO to prove the contrary by experiment or otherwise. The PTO is not equipped to perform such tasks.")

Regarding claim 2, Asao discloses (par. 88) each of the three color light sources has one of colors Cyan, Magenta and Yellow (full color display).

Regarding claims 5 and 6, Yamazaki discloses (par. 11) liquid crystal layer being Optical Compensated Birefringent (antiferroelectric liquid crystal) mode or Ferroelectric Liquid Crystal (FLC) mode (as in claim 6).

Regarding claims 7 and 8, Yamazaki discloses (par. 268) three color light sources being sequentially lit for up to about [fraction (1/180)] of a second during three subframes, and wherein one frame period is approximately [fraction (1/60)] of a second; wherein a lighting time of each of the light sources at each subframe is less than [fraction (1/180)] second (as in claim 8).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Sefer whose telephone number is (571) 272-1921.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915.

Art Unit: 2826

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ANS

November 22, 2006



*A. Sefer*  
*Patent Examiner*  
*Art Unit 2826*